

Abstract

In the continuous production of polyesters, the esterification/transesterification of dicarboxylic acids or esters of the dicarboxylic acids with diols is performed in at least one reaction stage, the prepolycondensation of the esterification/transesterification product is performed under a vacuum in a reaction stage consisting of a vertical tube, and the polycondensation of the prepolycondensation product is performed in at least one reaction stage. To be able to perform the prepolycondensation in a reaction stage, while at the same time increasing the viscosity of the prepolycondensation product and decreasing the process temperatures, the esterification/transesterification product flowing into the prepolycondensation reactor successively traverses in a free movement under limited heating first at least one first reaction zone formed of an annular channel, is then introduced into the radially outer ring duct of at least one second reaction zone formed of an annular channel divided into a plurality of concentric ring ducts, thereafter is successively passed through the ring ducts to the outlet, and is then introduced into a stirred third reaction zone located at the bottom of the vertical tube.